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ABSTRACT

The sixth part of a 10-part series, this report was compiled by the Educational Development Center at Wilkes College. The series deals with various aspects of the treatment of delinquents and is intended as a summary of research findings in each of the areas treated. Each report was prepared by a scholar-practitioner and is presented in a way that will be of value to professionals who deal both directly and indirectly with the treatment of delinquent youth. The report is, in fact, one manuscript of 627 pages; however, to make it more easily used, it is published in 10 separate parts. A detailed table of contents for the entire series is presented at the end of each part. This part begins by discussing deviance in a behavioral context. It then analyzes some assumptions and procedures relating to methods of behavior modification. Finally, it presents three composite behavioral modification techniques: behavioral contracting, token economies, and reinforced modeling. (Author)

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THE TREATMENT OF DELINQUENCY SERIES
AN EDC REPORT

CHAPTER 6

**Behavior Modification with
Disruptive, Delinquent, and
Otherwise Deviant Adolescents**

U.S. DEPARTMENT OF HEALTH,
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Editor's Preface .

This report is part of a ten part series compiled by the Educational Development Center at Wilkes College. The series deals with various aspects of the treatment of delinquents and is intended as a summary of research findings in each of the areas treated. Each report was prepared by a scholar-practitioner and is presented in a way that will be of value to those whose calling has led them to educational careers dealing both directly and indirectly with the treatment of delinquent youth. The report is, in fact, one manuscript of 627 pages; however, to make it more easily used, it is published in ten separate parts. A detailed table of contents for the entire series is presented at the end of this part.

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We invite any and all comments and/or inquiries concerning this series.

Joseph A. Skok, D.P.A.

Director
Educational Development Center

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CHAPTER VI

BEHAVIOR MODIFICATION WITH
DISRUPTIVE, DELINQUENT,
AND OTHERWISE DEVIANT ADOLESCENTS

Douglas Cullinan

Widespread interest and controversy has lately grown around programs for dealing with adolescent maladjustment by means of "behavior modification." Behavior modification treatments, and those purporting to be so, have been applied to many disturbing behavior patterns in a wide range of educational, correctional, and related settings involving maladjusted adolescents and youth. The present chapter presents a behavioral conceptualization of the acquisition and performance of maladjusted behavior, basic assumptions underlying behavior modification intervention, a brief description of intervention techniques, and three composite behavioral treatments for adolescent adjustment problems.

The efforts of most teachers, caseworkers, counselors, therapists, and other helping professionals are guided to some extent by the intervention philosophies subscribed to. Readers are no doubt aware of many theories about the causes of adolescent maladjustment

and delinquency. The causal variables emphasized in favored theories affect both how the helping professional perceives an adolescent's deviance and which interventions are selected for use. Therefore, practitioners must recognize and critically examine assumptions which guide their intervention activities.

In the following section, a behavioral viewpoint on adolescent deviance is described and contrasted to the personality model of deviance. Although there is no single behavioral theory, the behavioral viewpoint does give more emphasis to certain factors in the development and maintenance of delinquency. These factors will later be translated into procedures for behavior modification intervention.

Deviant Personality

Many accounts of adolescent deviance are based on personality theories which assume that behavior is merely outward evidence of inner personality tendencies; that is, stable predispositions or motivations to act and think consistently, even when circumstances vary widely. According to personality theories, deviant behaviors are impelled by mental forces (often abnormal ones) of which the individual may be partially or totally unaware. The exact nature of these forces depends upon the particular level of analysis chosen.

Deviant personality has been traced, for instance, to biological factors, such as evolved tendencies to aggress (Lorenz, 1966; Storr, 1970), unusual characteristics of nervous system functioning (Eysenck, 1964; Hare, 1970), or chromosomal irregularities (Court Brown, 1969; Polani, 1967). Other analyses propose that intrapsychic tensions (Slavson, 1961), impoverished self-image (Vorrath, 1972; Reckless, 1961), defective ego or superego functioning (Reiss, 1952), underdeveloped conscience (Weiner, 1970), or other unfortunate mental conditions are implicated in personalities which generate or cannot inhibit performance of disruptive, delinquent, or otherwise deviant behavior.

Interpretations of adolescent behavior problems as signs of inborn disabilities to acquire cultural norms or of inner personality forces warped by unfortunate earlier experiences are often intriguing and appealing, but they carry certain practical drawbacks. For example, deviant personality tendencies typically are both inferred from current deviant behavior and used to explain subsequent deviant behavior. Explanations based on this circular logic can cause practitioners to overlook important situational determinants of deviant behavior which do not support the explanation.

An additional shortcoming of many personality models of disturbance is that causal factors are seldom stated in measurable terms. Thus, the model can indefinitely remain immune from scientific scrutiny and continue to generate treatment applications of

unknown worth. In fact, there is little evidence for the effectiveness of personality-based treatments for adolescent delinquency and social maladjustment.

Behavioral View of Deviance

A distinctly different conceptualization of adolescent deviancy arises from the psychological technology of "behavior analysis." In behavior analysis, the existence of covert mental events, personal feelings, remote childhood experiences, or biological conditions is not necessarily denied, but the importance of these factors is de-emphasized in planning for meaningful changes in deviant behavior patterns. Instead, an adolescent's behavior, deviant or otherwise, is viewed in terms of current environmental circumstances, including events dependent on the behavior of others, events produced by the delinquent's own behavior, and impersonal events. It is convenient to consider separately the ways in which deviant behavior is acquired and the factors which maintain it.

Acquisition

Children are often directly trained to behave in disruptive or otherwise deviant ways. Disputes between a child and an adult or another child are often resolved on the basis of whoever is willing to coerce the other more intensely. Coercive child behavior such as demanding, crying, screaming, pushing, or hitting often produces

compliance by the other party to the dispute; this compliance encourages the coercer to employ similar disruptive behavior in subsequent disputes (Patterson, Cobb, & Ray, 1973). Further, if mild coercion is initially unsuccessful, the child learns to use intenser forms.

Additionally, adults often unintentionally train deviance by allocating most of their attention to disruptive behavior patterns rather than pro-social ones. When youngsters behave deviantly, parents and teachers frequently attempt correction through appeals for proper behavior, criticism, shouted commands, or discussion of the problem. It has repeatedly been shown that these tactics are often only temporarily effective, and that adult attention (even unfavorable attention) can encourage deviant child behavior in the long run (e.g., Becker, Madsen, Arnold, & Thomas, 1967).

Children also learn deviant behavior by observing members of the family, peer group, or community model disruptive and delinquent modes of behavior. If, as is the case in some subcultures or communities, there are many persons who exhibit deviant behavior, the children are exposed to repeated and diverse kinds of deviant behavior. Films, television, reading matter, and verbal accounts of aggression or lawbreaking are also rich sources of information on how to act deviantly.

The above descriptions of some of the ways in which deviant behavior is learned do not exhaust the possibilities. They are merely

intended to show that personality assumptions such as biological predispositions, warped mentalistic forces, or mysterious inner impulses are not required to account for the acquisition of deviant behavior.

Modeling, unintentional training, and other sources of deviant behavior are available to almost all children, of which only a fraction engages in patterns of behavior which eventually are likely to bring them to the attention of the helping professions. In other words, most children have the competence to behave deviantly; conditions regulating the performance of deviant behavior are of greater interest to those who intervene in these patterns of maladjustment, because these are the important current events involved in the analysis and subsequent modification of deviant behavior.

Maintenance

The performance of deviant behavior can be strengthened and sustained by the direct consequences it produces. Some of the consequences of disruptive, delinquent, or other deviant behavior are obvious: possession of tangible items which otherwise would be unavailable, income to support everyday nondelinquent activities, escape from distasteful requirements such as employment or education, acclaim from deviant peers and increased status in their eyes, or access to prohibited privileges. Since these desirable consequences are often more immediate and predictable than adverse consequences

such as retaliation from victims, criticism and censure, or apprehension by the police, it is understandable how the consequences of some deviant behavior serve to support this behavior.

Deviant behavior is also influenced vicariously because people judge the success of others' actions and regulate their behavior accordingly. When a child's peers violate rules, rarely get punished, but do enjoy the benefits of their deviant activities, the child may be motivated to behave similarly.

Aside from direct consequences and vicarious influences, self-controlling events are also an important factor governing deviant behavior. Through instructions, direct training, and example, adolescents learn to set standards for their own social behavior and to reward (or punish) their own behavior if it meets (or falls short of) those standards. By aiming for antisocial goals and self-rewarding for achievement of these, deviant adolescents could maintain aggressive or delinquent behavior patterns despite repeated penalties and intensive contact with rehabilitation programs.

To recapitulate, the abundance of opportunities for acquiring deviant behavior suggests that almost any adolescent is capable of aggressive, disruptive, delinquent, or other deviant behavior. More important are the factors which govern whether these types of activities are likely to be performed. Direct behavioral consequences, vicarious effects, and self-control systems are three main ways in which performance of behavior is regulated; virtually any deviant

behavior pattern can be accounted for in terms of these situational influences. By analyzing these factors and manipulating ones which can control behavioral problems, rehabilitative personnel may employ behavior modification to catalyze important improvements in the life patterns of deviant children and youth.

Behavior Modification Assumptions

Behavior modification is not a unitary technology of intervention. Due to incomplete or conflicting evidence on certain issues, there is a good deal of variability among adherents as to which techniques of analysis and modification receive greater emphasis. However, certain points of agreement exist among the various versions of the behavioral approach. The most important of these are discussed in the following section, which includes one way in which behavior modification interventions can be categorized. Important details beyond the scope of this brief discussion, such as origins and development of behavior modification, research considerations, evidence for various aspects of the behavioral approach, mistaken and valid objections to and conceptions of behavior modification, ethical considerations, and other important areas are available in many other sources (e.g., Bandura, 1969; Kanfer & Phillips, 1970; Kazdin, 1975; and O'Leary & Wilson, 1975).

Observable Phenomena

One major thrust of the behavioral approach is its focus on observable phenomena. For a variety of reasons, behavior modification is concerned with changing the behavior of the person in need of intervention rather than his supposedly defective personality traits, maladjusted mental states, or other presumptive conditions. To do this, the actual behavior to be changed (target behavior) must be stated in such unambiguous terms that a minimum of inference is required in judgments as to whether the target behavior has occurred or not. Alternatively, easily measurable products of behavior can be used as the data in a behavior modification intervention. That is, if an adolescent is to be taught to accurately fill out a job application blank, it makes little difference whether the actual behavior of writing in the pertinent information is observed directly or the completed application is checked; in this case, measurement of the product (the completed application) is tantamount to observing the behavior (unless someone else could have completed it for him).

There are other observable phenomena besides the target behavior which must be specified. Environmental conditions associated with the target behavior require some attention. Behavior always happens in some situational context, including those things which happen before the behavior occurs and those which happen afterward. Many behaviors are selected for change because they occur under the

wrong circumstances. For instance, cursing per se is unlikely to be seen as adolescent deviancy, but cursing in the presence of school teachers or following parental requests might be considered part of an adolescent's maladjustment, because his cursing behavior is performed without proper regard to the situation. On the other hand, some problems may stem from target behavior which is too discriminating, that is, which occurs in a maladaptively limited number of circumstances. An important case of this is the fact that many interventions, behavior modification and otherwise, can produce target behavior changes in certain circumstances--classroom, group home, detention center, caseworker's office, etc.--but the improved behaviors do not generalize to untrained situations. Behavior modification interventions explicitly recognize that behavior is often situation-specific; therefore, the situations in which behavior change is to occur must be specified. In the process of specifying the circumstances in which target behavior is to occur, information about these circumstances may come to light which can aid decisions about intervention practices.

Additionally, observing consequences which typically follow target behavior is very important. If a target behavior is not being performed enough, the environment may be devoid of a consequence which could strengthen and support that behavior; if a target behavior occurs too often, there may be some consequence which is supporting the deviant behavior. In either of these cases, careful scrutiny of the

consequential environment for a behavior may suggest an intervention strategy.

In addition to careful specification of the target behavior and the environment in which the behavior occurs (antecedent and consequent), the focus on observable phenomena issue requires that intervention practices be specified in such a way that they could be exactly duplicated by other helping professionals. This point is somewhat redundant with the foregoing requirements, because intervention practices are activities carried out with a specific target behavior, before and after occurrences of that behavior.

When helping professionals come into contact with adolescent deviancy, the problems of maladjustment are generally stated in the form of a complaint which is not amenable to behavioral intervention. Keeping in mind behavior modification's focus on observable phenomena, the complaint must be restated in directly measurable terms. For instance, "aggression" may be restated in terms of certain types of physical contact between the adolescent and other persons, statements which threaten harm to others, damage to or disruption of the property of others, etc. "Poor self-image" might be restated in terms of compliance with unwarranted demands of peers, statements of one's own incompetence, unworthiness, or unattractiveness, failure to engage in a task for the second time following a first unsuccessful attempt at the task, etc. Although complaints such as aggression or poor self-image may refer to more phenomena than can

be specified and observed, correction of only those which can be specified and observed will almost invariably go a long way towards remediation of the complaint. If necessary, subsequent interventions can focus on uncorrected aspects of the complaint.

Depending on how the complaint or problem is stated, intervention may attempt to reduce some target behavior and increase other. In many intervention programs, it is necessary to work on various behaviors simultaneously, reducing some, increasing others.

Target Assessment

After the problems of a deviant adolescent are stated so that observable phenomena are focused on, regular, repetitive measurement of target behaviors or other observables is undertaken. The most obvious rationale for this is that relatively objective information as to the effectiveness of an intervention is required. Reliance upon human judgment, informal impression, or clinical estimates of improvement may reflect changes in judgmental standards as often as actual changes in target behavior.

Another rationale for ongoing assessment of target behavior is that the extent of the target behavior prior to intervention provides valuable information for treatment decisions. Adults who make complaints about adolescent deviancy often hold different standards for

deviancy; varieties, intensities, and frequencies of behavior which are intolerable to some may not be noticed by others. In fact, measurement of pre-intervention levels of target behavior may occasionally show that the complaint about the adolescent was inaccurate because the extent of his target deviant behavior was about the same as that of peers who were not complained about. In this case, assuming that the adult had a legitimate complaint, it would then be necessary to reconsider exactly which behavior was the source of disturbance and therefore the target of intervention.

Ideally, certain characteristics of the target behavior (how often it occurs, whether it has definite beginning and ending points, whether it results in a tangible product, etc.) indicate preferred methods of assessment. Different strategies for carrying out the regular, repetitive measurement necessary in behavior modification are described in detail elsewhere (for example, Cooper, 1974; Hall, 1971). Practical limitations usually dictate the strategies used and the situations selected for recording however.

Effectiveness Verification

Given that the target behavior and other important observable phenomena involved have been clearly described, and that an appropriate assessment procedure has been provided for, the helping

professional is in a position to evaluate the effect of his intervention upon the target behavior. A built-in capability for skeptical self-scrutiny may be the most important contribution of the behavioral viewpoint to the helping professions. Through the use of appropriate verification evaluation designs, the effects of behavioral or other intervention practices upon target behavior can be determined, not only after intervention (as in group research designs) but in detail, during intervention. Interventions which are ineffective for particular problems or individuals can be put aside, the relative effectiveness of different treatments for particular problems can be compared, the most powerful components of a generally effective intervention can be identified, and other information can be gathered.

Two of the verification designs for scrutiny of treatment effectiveness are described below. Helping professionals who, whenever possible, employ these to evaluate their interventions with deviant adolescents are joining in an effort to move treatment beyond its present standing as little more than a craft.

Multiple-Baseline Design

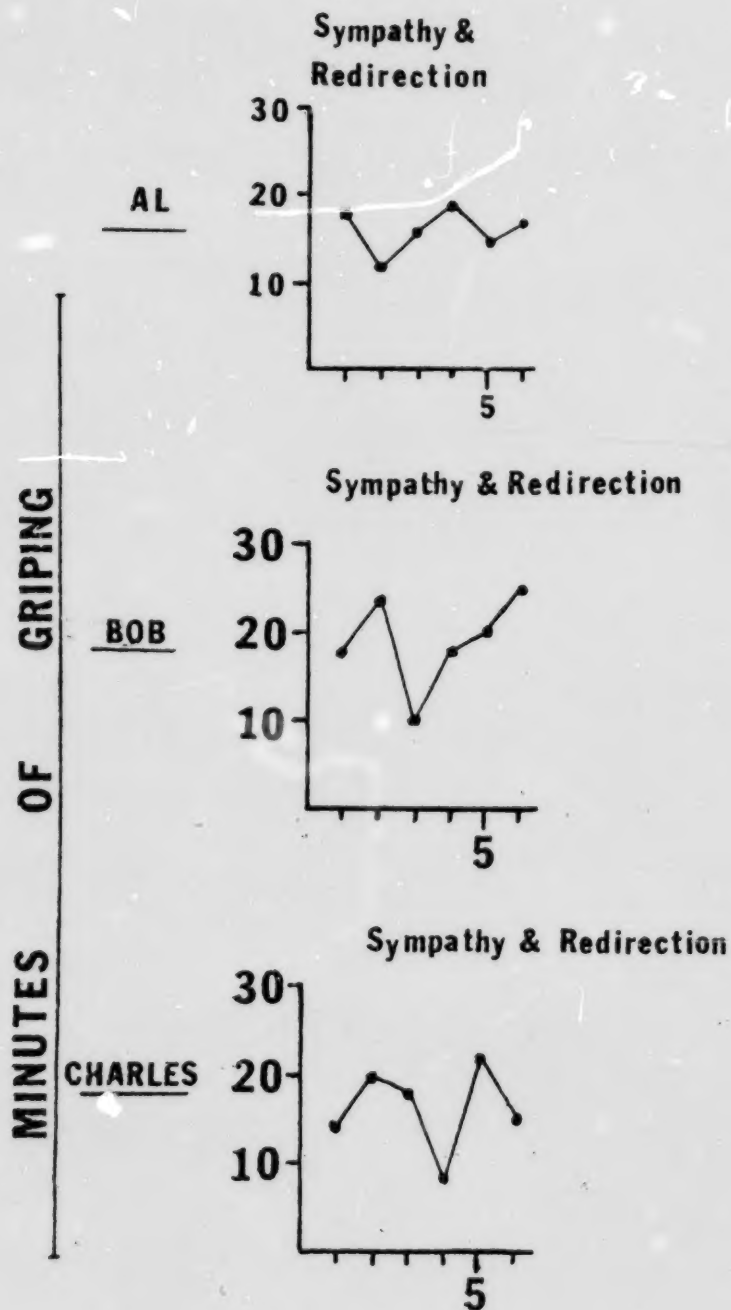
Suppose that a caseworker counsels three boys, Al, Bob, and Charles, 30 minutes each day on an individual basis. The goal of counseling is meaningful discussion of the problems which could lead to later parole violations, but most of counseling time is usually wasted because each boy constantly gripes about petty institutional

grievances. The caseworker decides to note the duration of this griping on a daily basis by unobtrusively starting a stopwatch when griping begins, stopping it when griping ceases, restarting the watch when griping is renewed. The caseworker also carefully considers what griping consists of, and writes this down so as to reduce the risk of day-to-day shifts in his criteria for recording griping.

The first six days of this procedure are represented by Figure 1. During these sessions, when Al, Bob, or Charles griped, the caseworker sympathetically assured the boy that he understood how annoying the grievances were, then firmly attempted to redirect the conversation toward more relevant areas of discussion (post-release adjustment).

Beginning on day 7, the caseworker changed his strategy during Al's counseling sessions. Recording of gripes proceeded as usual but each time Al griped, the caseworker intentionally ignored the boy by either looking away, attending to paperwork, giving the appearance of being bored, or in some other way showing disinterest in his client. When there was a pause in the griping, the caseworker directed conversation toward the relevant topics. Also, if Al made statements pertaining to post-release adjustment, the caseworker gave the boy his total attention by looking at him, nodding, and entering into dialogues.

This new strategy took place only with Al during days 7 to 13; with Bob and Charles, sympathy plus attempts to redirect the



6 DAYS

FIGURE 1

conversation remained in effect. The record of gripes through day 13 is shown in Figure 2.

The caseworker's subjective impression was that the new procedure was having no effect on Al's griping, but when the graphic record of gripes (Figure 2) was considered, a small but consistent decline in wasteful griping was noted. This encouraged the caseworker but he realized that many institutional happenings besides his new counseling tactics could have been responsible for the decline. On the 14th day he decided to use these tactics in Bob's counseling session as well as Al's, maintaining the original tactics with Charles. Griping for each boy up through day 22 is graphed in Figure 3.

Clearly, the level of griping during counseling dropped for Al, then for Bob, and only after the changed tactics were put into effect. Yet Charles' griping continued at a high level under the original counseling conditions. The caseworker is becoming convinced that his changed counseling tactics, rather than other factors, are providing the desired effects on behavior, because it would be an unlikely coincidence that the other factors affected Al, then Bob, only after the caseworker began his new procedures. To assure himself beyond reasonable doubt, the caseworker extended the ignore treatment to Charles' counseling sessions beginning on day 23. The results of this are displayed in Figure 4.

After 30 days, the caseworker discontinued recording minutes of griping. He had not only provided desired change in the boys' behavior but, more important, was able to state with confidence how he had done

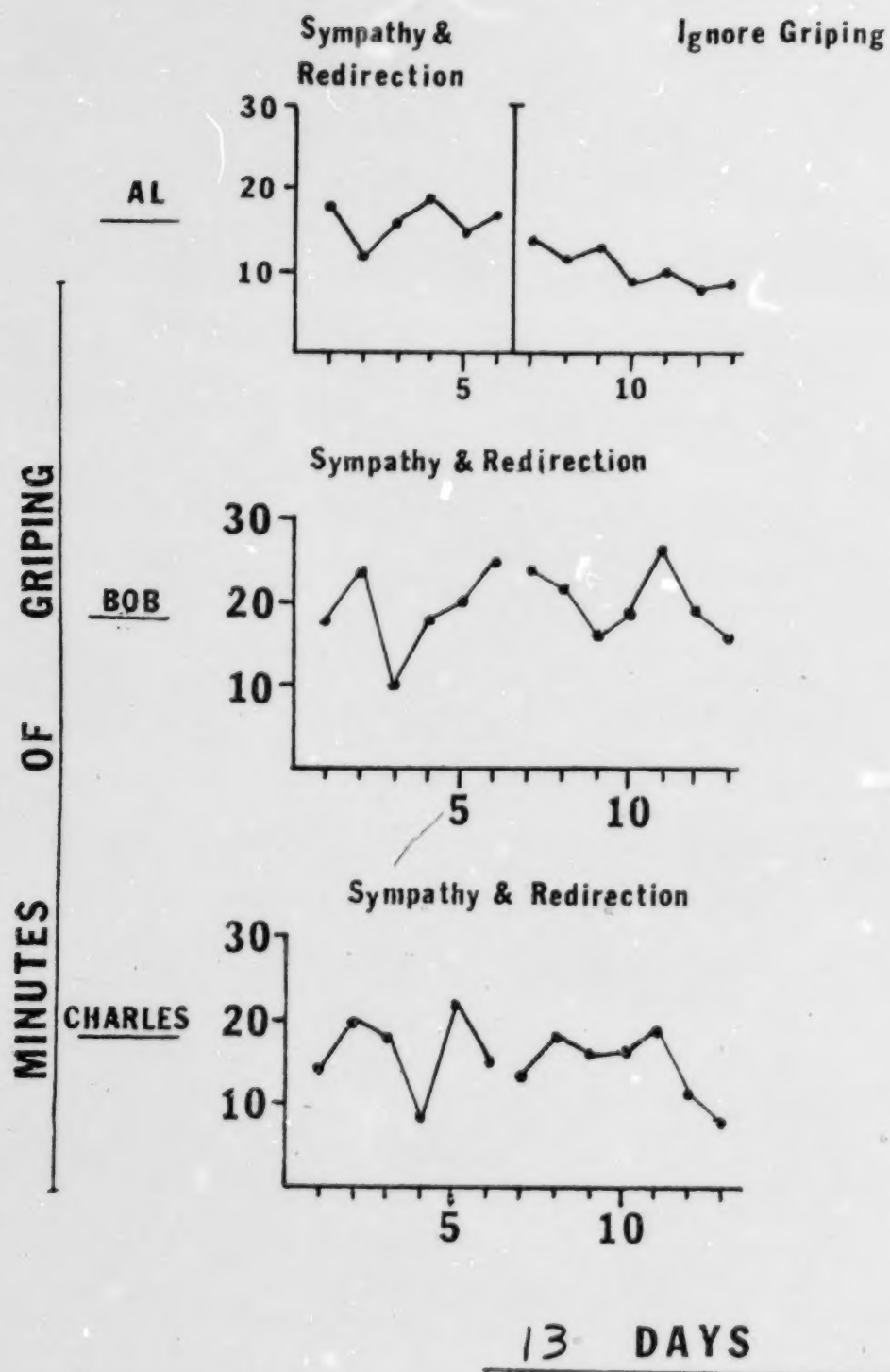


FIGURE 2

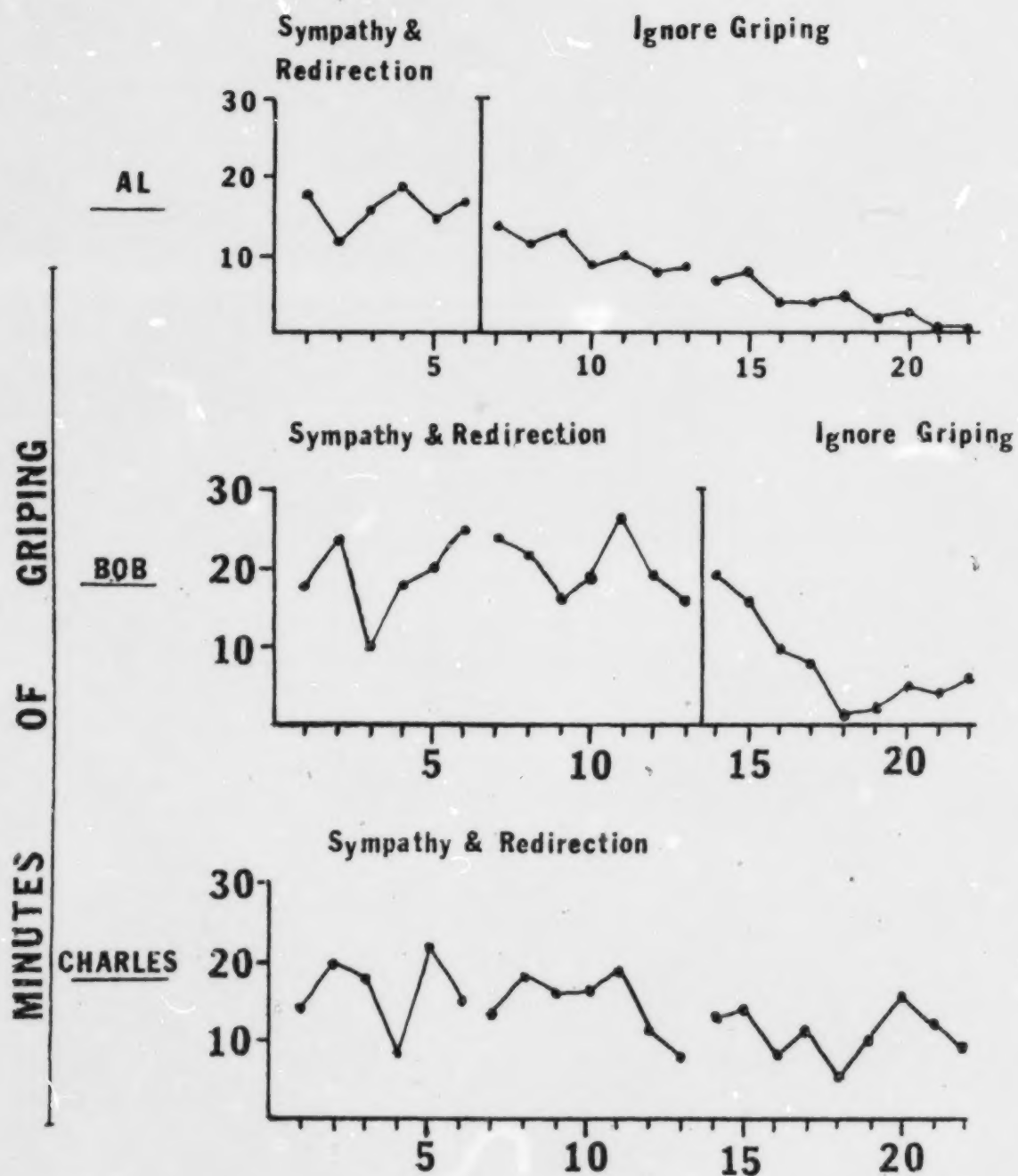


FIGURE 3

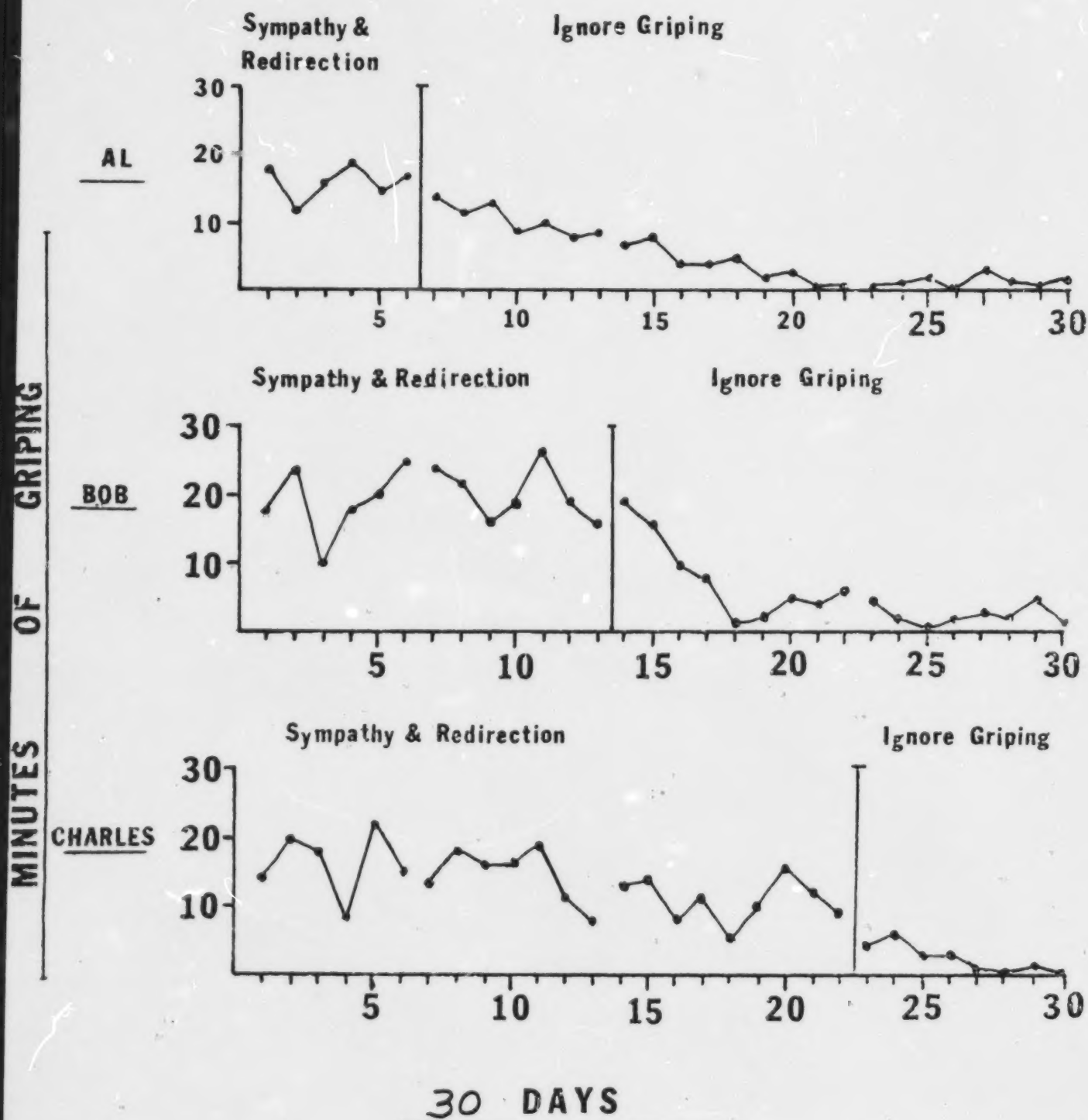


FIGURE 4

this. In other words, he had located environmental events (in this case, his attention) which potentially could modify Al's, Bob's, and Charles' behavior, and had verified that these events, not unknown influences, were responsible for the behavior change.

The above case involved evaluating a treatment designed to reduce griping by the use of a "multiple baseline" verification procedure. In this strategy, several behaviors (the same behavior of several people, different behaviors of the same person, or a single behavior of one person in different settings) are measured simultaneously. A specific treatment is implemented for one of the behaviors; if the behavior changes in the desired direction, the same treatment is extended to the next behavior being measured. If this behavior also is modified, the treatment is extended to the third behavior, and so on. If, after implementation of the treatment sequentially on several behaviors, each behavior is predictably changed, the most reasonable assumption is that the treatment produced the changes.

Reversal Design

Besides the multiple baseline design, another design for determining treatment effectiveness is the "reversal" design. As in the multiple baseline design, behavior (or the product of behavior) is regularly measured throughout a project. The different conditions to be contrasted (usually intervention vs. nonintervention) are repeatedly instituted and withdrawn. If during intervention periods desired

behavior changes occur but these changes are not present during non-intervention periods, a cause-effect relationship between treatment and behavior change becomes believable.

For example, the teacher of a junior high remedial reading class was disturbed by the fact that many pupils came to class late. The late pupils not only missed instruction themselves but their tardy arrival disrupted the flow of teaching for others. In order to quantify her idea about the extent of the problem, the teacher defined a pupil as tardy if he was not seated when the class bell began to ring. Each day the number of tardies to this class was tallied with the use of a small button-operated golf score counter. More than 10 pupils were tardy on each of the first three days; this period served as a nonintervention baseline against which subsequent changes in tardiness could be contrasted.

Towards the end of the third day, the teacher divided the class into three teams of seven pupils. A poster for each team displayed the names of team members. She announced that the class learning center, which contained comic books, paperbacks, language training games, and other activities very popular with the pupils, would be reserved each day for the team which had the fewest tardies that day. The winning team could enter the learning center during the last 15 minutes of the period; in case of ties, the 15 minutes was to be split equally among tied teams. This "promptness contest" was in effect for the next four days. Tardies for days 1 to 7 are shown in Figure 5.

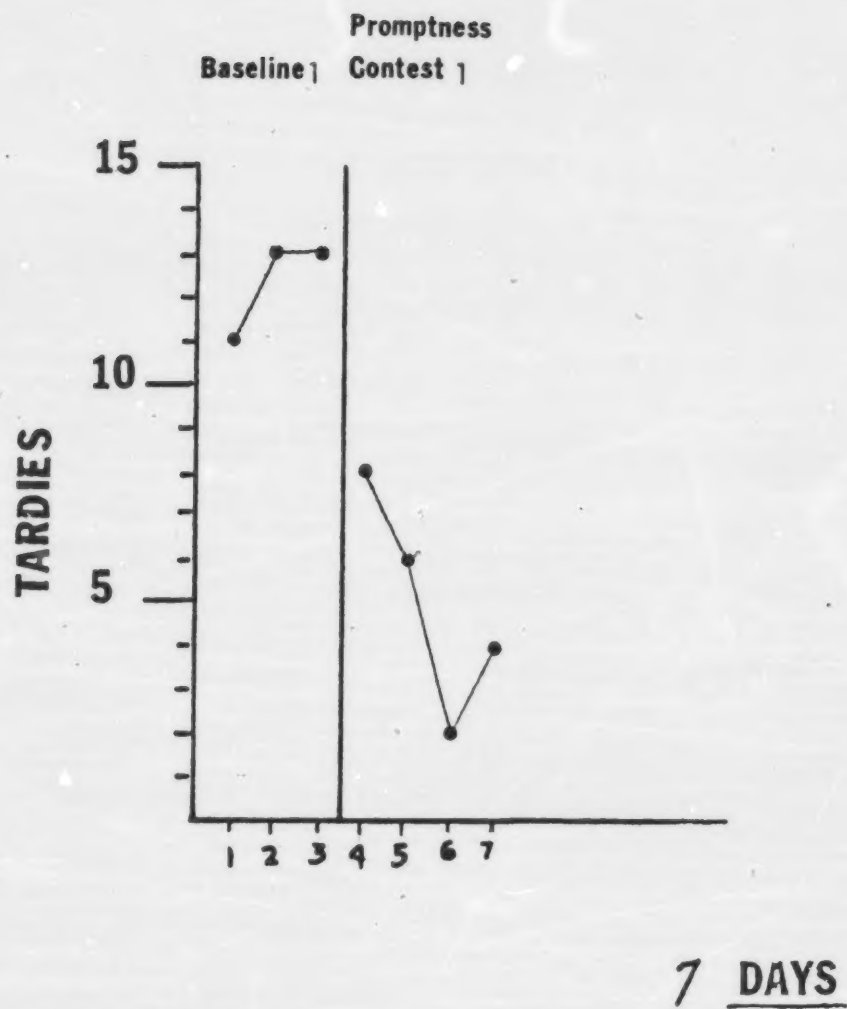


FIGURE 5

The teacher knew that tardies were much less frequent during the promptness contest (averaging 5 per day) than before (more than 11 per day on the average). Was this reduction due to the contest?

Between days 3 and 4 many things happened which could conceivably have produced less tardiness. The teacher reasons that if her promptness contest was the important factor, discontinuing the contest would probably produce a reversal of the improved level of tardiness.

The contest was discontinued on days 8 to 12; during these days, access to the learning center area was available to anyone who finished regular class assignments early. The increased level of tardiness during this time suggested that the teacher's reasoning was correct. During the next several weeks (days 13 to 35), repeated implementation and withdrawal of the promptness contest resulted in a convincing demonstration that other influences were not involved since it was very improbable that these would have come into play only during contest periods. The entire promptness contest project is represented by Figure 6.

This method of alternately applying and withdrawing treatment conditions in order to confirm or disconfirm the ability of a treatment to produce desired changes is called a "reversal" verification procedure. The number of required alternations between treatment application and withdrawal depends on the magnitude and stability of the changes produced, and on how convincing the demonstration must be. As with the multiple baseline verification design, the reversal design is

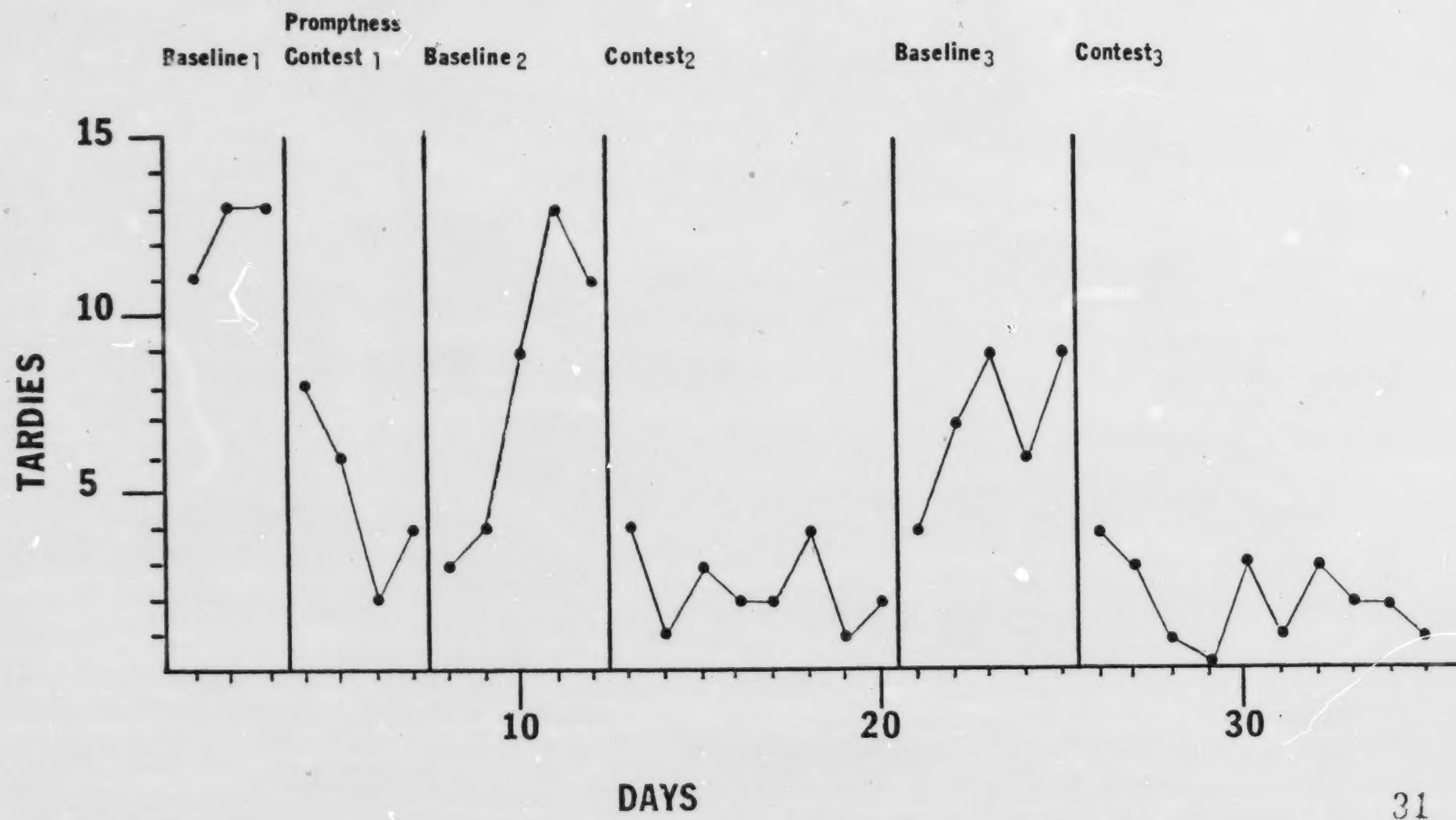


FIGURE 6

well suited for testing the effectiveness of many types of intervention, not merely behavior modification treatments. There are other designs, but these two are well suited for application to one or a few children.

Verifying that a specific treatment technique is responsible for improved functioning is not an idle research exercise. Counselors, educators, therapists, and other professionals know that there are myriads of treatments available, each recommended by its own set of authorities. The professional who works with deviant adolescents wants these children to improve but wants also to know with some confidence whether or not the treatment used was responsible for the improvement. Analysis of an intervention technique by use of the multiple baseline or reversal design leads to confident decisions about the role of an intervention in a particular improvement. By verifying the effectiveness of a treatment (or demonstrating its lack of effectiveness), the professional is more able to intelligently select appropriate treatments for subsequent problems and to recommend demonstrably effective treatments to fellow workers.

Behavior Modification Procedures

In general, any intervention which focuses on observable phenomena, involves regular, repetitive measurement of these phenomena, and evaluates the course of measured phenomena by means

of a verification design, is a satisfactory behavioral intervention. In other words, interventions based on psychoanalytic theory, other personality theories, self or ego theory, or any philosophical basis could be verified as an effective intervention, and nonbehavioral treatments should be evaluated in this way. However, there are a number of treatment procedures which are more commonly associated with behavior modification. These interventions have satisfied the foregoing criteria with such a wide range of clients, situations, and problems that they are considered "good bets" by behavior modifiers.

Many behavioral techniques are concerned with regulating the performance of behavior which is already familiar; other techniques promote behavior competence by facilitating the acquisition of information about how to behave. The performance regulation techniques are discussed first; they can be subdivided into techniques for strengthening or increasing behavior, and those for weakening or decreasing behavior.

Regulating Performance

Strengthening Behavior

Behavior may be strengthened through direct reinforcement techniques. Direct reinforcement techniques take advantage of the fact that most behaviors can be influenced by the changes they produce in the environment. By intentionally arranging environmental events which follow behavior, behavior modifiers have produced changes in a wide

range of simple and complex human behavior, ranging from thumb twitches (Sasmor, 1966), smiling (Brackbill, 1958), and heartbeats (Weiss & Engel, 1971) to negotiating conflicts (Kifer, Lewis, Green, & Phillips, 1974), improved reading (Staats & Butterfield, 1965), and creative responding (Glover, 1974).

"Reinforcement" is the process in which a behavior becomes stronger (more likely to occur) as a result of its producing environmental consequences. All rewards do not necessarily reinforce behavior, and an event which reinforces behavior is not necessarily perceived by the behavior as subjectively pleasant. An increase in the frequency or other strength of the target behavior is what indicates the operation of reinforcement.

Some forms of direct reinforcement are termed "positive reinforcement." In positive reinforcement, something is added to the environment (a positive reinforcer) following a behavior, and the behavior is strengthened. Typical positive reinforcers include interpersonal attention (praise, recognition, sometimes even criticism), consumable, symbolic, or other tangible items (cigarettes or gum, money or other tokens, gifts), and access to desirable activities (opportunity to be alone, time spent in a recreation area, opportunity to talk with a counselor). Positive reinforcement was used to increase membership in an urban recreation room program for children and teenagers (Pierce & Risley, 1974). In order to encourage recreation within the structured program (rather than in the neighborhood at large),

recreation program membership drives were conducted in which children who brought in new members received one extra hour of recreation time and had their names posted. Not only was membership increased dramatically, but a reversal design showed that the positive reinforcement procedures were responsible for this beneficial effect.

Another kind of direct reinforcement is called "negative reinforcement." Negative reinforcement is a process in which something is subtracted from the environment (a negative reinforcer) following behavior, and the behavior is strengthened. Suppose that all the residents of an institution for delinquents are required to get a short haircut every two weeks. This requirement can be avoided, however, by any boy who completes and turns in all remedial reading exercises assigned for the two-week period preceding a haircut. Boys who fulfill this requirement are excused from the haircut; and if they repeatedly fulfill the requirement and avoid haircuts, it is a negative reinforcement procedure.

In addition to direct reinforcement, behavior can be strengthened through vicarious reinforcement procedures. Vicarious reinforcement is in operation when an observer witnesses the behavior of a model, and as a result some behavior of the observer is strengthened. There are several variations of vicarious reinforcement. Often the model is seen to receive favorable consequences for his action, and the observer behaves similarly in order to receive those benefits. On the other hand, if the model is prestigious in the eyes of the observer (is known to be

very competent, possesses desirable resources or status, etc.), the model's behavior may be imitated even though no favorable consequences are observed. Additionally, if the model's behavior violates known rules or conventions but no unfavorable consequences are forthcoming, similar behavior in the observer may be vicariously reinforced.

In one demonstration of vicarious reinforcement, young delinquents learned to give up immediate benefits in order to obtain even greater delayed rewards by watching other delinquents (whom they respected) engage in delay of gratification (Stumphauzer, 1972).

Vicarious reinforcement procedures are more difficult to implement than direct reinforcement techniques; but since vicarious reinforcement is occurring unintentionally and in unstructured ways all the time, it is a potentially powerful method of behavior modification which should be more widely used.

Another means of strengthening behavior is through self-reinforcement procedures. Self-reinforcement is similar to direct reinforcement except that the behavior is also the manager of his own environment. Adolescents can be taught several strategies which can lead to self-reinforcement: careful observation and recording of one's own target behavior, setting standards for behavior or giving directions to oneself, and applying positive or negative reinforcement to one's own behavior. Self-reinforcement was the intervention procedure in a project to improve various task-oriented behaviors of pupils in a junior high school class (Broden, Hall, & Mitts, 1971). A girl who did not

consistently perform assigned classwork was taught to mark herself as on-task when she was performing assignments appropriately. Evaluation with a reversal design showed that not only was the self-recording procedure an effective way of strengthening on-task behavior, but it was also as effective as a direct reinforcement intervention used by the teacher (praise for on-task behavior).

Weakening Behavior

Other performance regulation techniques are designed to weaken or decrease behavior. Behavior modification techniques for weakening behavior are more or less the reverse of ones for increasing behavior.

Behavior which is repeatedly ineffective in achieving any change in the environment will less frequently be performed. The process of extinction involves identifying the events which reinforce a particular behavior so that they can be prevented from occurring after that behavior, rendering the behavior futile. Many disruptive verbal or motoric behaviors in classroom, home, institution, or other setting function to focus adult attention on the behavior. In many of these instances, the behavior will weaken and eventually cease if the adult will carefully ignore the unwanted response.

Human behavior is, fortunately, responsive to the unfavorable effects it produces. The process of punishment is in effect when behavior is followed by unfavorable additions to or subtractions from the environment, and the behavior is weakened. Penalties,

admonitions, and chastisements do not necessarily function as punishment; conversely, punishment often occurs without pain or physical coercion. In other words, in the behavior modification context, punishment is said to take place when target behavior occurs less frequently or is otherwise weakened.

Depending on the nature of the unfavorable event which follows the target behavior, punishment may be of two types. "Aversive punishment" is indicated when behavior is weakened due to the addition of something to the environment which follows the behavior. For instance, the teacher of low-track high school English classes reduced disruptive pupil talking and turning around by consistently using a reprimand as the consequence for instances of these behaviors (McAllister, Stachowiak, Baer, & Conderman, 1969). Although in this particular case a verification design was used to show that the reprimands were effective in punishing disruptive talking and turning around, adult reprimands are frequently ineffective in reducing adolescents' deviance.

Another direct punishment procedure is called "cost punishment." The cost punishment procedure is in effect when target behavior produces subtraction of something from the environment which follows the behavior, and the behavior is weakened. A frequent cost punishment strategy with adolescent deviant behavior is the use of fines in a token economy: inappropriate behaviors cost the adolescent some of the tokens previously earned through appropriate behavior.

A cost punishment intervention was applied to disruptively high noise levels in public school home economics classrooms of behaviorally disordered and other girls (Wilson & Hopkins, 1973). Popular music was played over a radio for the girls to listen to while they carried out assigned tasks; during intervention, an automatic device shut off the music briefly when talking and other noise exceeded a certain level. A verification design demonstrated that this intervention effectively punished noisy behavior and produced a tolerably quiet classroom.

A variation of cost punishment is termed "time out from reinforcement." If any situation contains many sources of social and other positive reinforcement for behavior, a brief period of deprivation from these desirable events can serve to punish whatever behavior it follows. A time-out punishment procedure was used to reduce rule violations, other disruptions, and threats to peers by the leader of a group of institutionalized delinquent adolescents (Brown & Tyler, 1968).

Another way in which behavior is weakened is through vicarious punishment. In vicarious punishment, the behavior of an observer is discouraged as a result of his witnessing the behavior of a model. The model's behavior may have produced unfavorable consequences; the model may have followed rules or otherwise acted appropriately, but was not seen to receive rewards; or the behavior witnessed may have been performed by an incompetent, despicable, or otherwise disrespected model. In each of these cases, the observer is less likely to perform the behavior which was modeled.

Behavior can also be weakened through self-punishment procedures. Self-punishment is closely analogous to self-reinforcement in that target behavior may be weakened through close self-observation and/or recording, the self-setting of criteria or standards, and self-dispensed penalties.

Promoting Acquisition

In addition to behavior modification procedures for regulating the performance of familiar behavior, behavioral interventions often promote the acquisition of competence to behave. Although it may be true that "there is nothing new under the sun," behavior which an individual has never performed before is novel to him. Novel behavior includes new combinations or sequences of smaller, familiar behavioral components, performance of familiar behavior under circumstances in which the behavior has not been performed before, and behavior which was not possible before due to organismic limitations.

Persons who are to acquire a new ability often possess skills which vaguely resemble the one to be learned. The new ability may arise from present behavior through a series of gradual behavior steps, each of which is a closer approximation to the terminal skill to be learned. Each of the successive approximations to the terminal skill may be reinforced directly by the environment (if increasing skill produces increasing payoff) or they may be self-reinforced (as the learner sees that he is becoming more proficient).

"Shaping" is an intervention in which the progressively closer behavioral approximations to a final behavior goal are intentionally reinforced. Shaping was used by Schwitzgebel and Kolb (1964) to induce deviant youths in a community to promptly attend counseling sessions and to perform verbal and other tasks during counseling. Shaping was also used by Tharp and Wetzel (1969) to increase verbal responses to requests. In this application, deviant children and adolescents were asked to supply information about their own activity and item preferences and dislikes, information used in decisions about potentially powerful consequences for target behavior and likely persons who could dispense them. Children who initially gave no or few responses to the questionnaire items were reinforced with consumables and praise for providing progressively more detailed responses. Shaping can be a powerful technique for inducing desired responses; however, it is often tedious, laborious, and time consuming.

Alternatively, novel responses can be transmitted through observational learning, a process in which attentive observers acquire competence to perform large chunks of new behavior from a skillful model. If intricate or highly unfamiliar behavior is to be demonstrated, observational learning can be enhanced by carefully sequencing the behaviors to be learned, demonstrating the behavior repeatedly using one or several models, drawing the observer's attention to particular aspects of the demonstration, and encouraging the observer to use

strategies for remembering what he observed (such as verbal labels, mental imagery, overt or mental rehearsal of the behavior, etc.).

It should be clear from the preceding discussion that behavior modification involves few mind-blowing new psychological principles. In fact, many of the techniques correspond to common sense. Translating these treatment principles into successful practice is not always a simple matter, however, especially with deviant adolescents. Some of the basic requirements involve time and effort which many practitioners are unwilling to expend (for example, the regular assessment requirement).

It is reiterated that almost any intervention technique could be considered a behavior modification treatment if it satisfies certain prerequisites, that is, focus on observable phenomena, repetitive assessment of these phenomena, evaluation within some type of verification research design. Conversely, teachers, counselors, rehabilitation workers, therapists, and other helping professionals often claim to employ behavior modification merely because they pass out trinkets, generously praise, use threats or seclusion, or ignore complaints; but obviously these practices are not necessarily behavior modification.

It is often helpful to conceptualize adolescents' problems and potential interventions in terms of the above behavior modification techniques. However, in actual practice single techniques are rarely used. Important and complex problems of adjustment are not likely to be solved in simple ways, and many of the successful programs have

been based on concurrent and successive use of various simple techniques in a composite intervention. The possibilities for combining the behavioral techniques are very large and many have, perhaps, yet to be explored. Three successful composite behavior modification interventions are presented below.

Composite Behavior Modification Techniques

Behavioral Contracting

One widely used composite behavior modification strategy is called behavioral contracting. A behavioral contract is a document which specifies relationships between behaviors and consequences. The contract specifies in some detail the desired consequences ("privileges") and the behavior required of the adolescent before these privileges will become available ("responsibilities"). Responsibilities and privileges are arrived at by negotiation between the adolescent and his parents, his teachers, or other authorities who wish behavior change. Often, these negotiations are refereed by a counseling behavior modifier.

There are several important elements which help insure effective behavioral contracting. Responsibilities and privileges must be stated in some detail to avoid later grief due to loopholes, misinterpretations, and so on. The responsibilities to be performed by the adolescent must be easily measurable. Responsibilities which require

arbitrary judgments on the part of the observer, which are a lot of trouble to observe and record, or which are performed at times or places which are not monitorable, are not suitable for inclusion into a behavioral contract. The relationship between responsibilities and privileges goes both ways; that is, when responsibilities are not performed, privileges are not dispensed, but when responsibilities are discharged, the privileges must be forthcoming.

In addition to arrangements in which completed responsibilities yield privileges while neglected ones do not produce the privileges, other incentives are often written into a behavioral contract. For example, performance of responsibilities which is highly consistent or otherwise above and beyond what was expected may receive an extra bonus. The criterion for receiving a bonus is written into the contract. Likewise, penalty clauses which describe unfavorable consequences for unusually poor performance of responsibilities can strengthen the behavioral contract as well.

Other contract clauses should cover the ways in which responsibilities are monitored and recorded. Record keeping can help insure consistent adherence to the contract by all parties, reduce questions or arguments about performance of responsibilities, and indicate how well the contract is working. Further information about behavioral contracting with specific cases of adolescent behavior problems is available elsewhere (DeRisi & Butz, 1974; Dinoff & Rickard, 1969; Dinoff, Serum, & Rickard, 1972; Jesness & DeRisi, 1973; MacDonald,

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Gallimore, & MacDonald, 1970; Stuart, 1971; Stuart & Lott, 1972; and Tharp & Wetzel, 1969).

The steps in writing a behavioral contract are illustrated in the case of Jim D., a fourteen-year-old in the eighth grade at a junior high school. Ever since the second semester of the seventh grade, he had performed near-failing work in his classes. There were numerous home and school conduct problems, but the one which brought Jim and his parents to the school counselor was his repeated truancy. Jim was frequently absent from school either all day or part of the day, although his parents did not let him stay home unless he was physically ill. The school was considering initiating a juvenile court complaint about his failure to attend school. The parents indicated willingness to try to work with the school counselor on this problem, although their lack of control over Jim in the home and community was not encouraging.

In order to arrive at Jim's responsibilities, it was only necessary to think in terms of behavior incompatible with missing school: attending each class in school. A listing of privileges for which Jim might work was obtained by questioning teachers, parents, friends, and others as to Jim's preferred activities, and by asking Jim himself about preferred people and activities. (An interview form, the "Mediator-Reinforcer Incomplete Blank" [Tharp & Wetzel, 1969] is helpful in obtaining this information from the adolescent.) In Jim's case, most of the potential privileges seemed to involve passing time with his father

in some way, such as throwing ball, playing cards, practicing driving, doing homework jointly, walking the dog, or other activities.

Once Jim's responsibilities and privileges had been specified, the next step was to decide how the responsibilities were to be monitored. This was achieved by use of an "attendance signatures" card, a simple 3x5 card with spaces for 14 teacher signatures on it. Jim was instructed that in order to receive a teacher's signature on his card, he had to approach the teacher and ask for the signature. The homeroom teacher would sign his card before 8:45 a.m. and during a fifteen-minute period immediately after school was over. Teachers in each of his other six class periods would sign the card if approached before the class bell rang and at the very end of the period. It was Jim's responsibility to request the signatures, and the teachers would not sign at any other time. Each day upon Jim's arrival Mrs. D. was to check and record the number of attendance signatures gathered that day, entering this onto a weekly chart. Later, when Mr. D. arrived at home from work, he was obligated to spend two minutes with Jim in the boy's choice of activity for each attendance signature collected that day.

Although there was a total of 70 possible attendance signatures to be collected in a week, Jim's attendance had been so spotty that perfect attendance at all classes was not immediately expected. However, to discourage extremely poor attendance, a penalty clause was added to the contract. If Mrs. D's record of attendance signatures indicated that

Jim collected less than 40 in a school week, he would not be permitted to leave his room on Saturday until noon. As a bonus for relatively good attendance, if Jim collected 55 or more attendance signatures during the week, his parents agreed to take him and one of his friends to the Friday night car races.

Several characteristics of this contract are worth noting. First, although even if school attendance successfully improved, there would still remain other significant problems; the selection of school attendance as a contracting target was wise because it was the immediate source of concern of the community authorities, and the monitoring of Jim's responsibilities was easy for his parents to do. Secondly, responsibilities and privileges were both broken down into small chunks so that the relationship between behavior and consequences was clarified. Further, both the bonus and penalty clauses involved consequences that were totally separate from the daily privileges so that if Jim realized late in the week that he was not going to achieve his bonus (or was sure to receive a penalty), he could still carry out his daily responsibilities in order to receive the daily privileges. Finally, the school counselor checked with Jim's parents through occasional phone calls to encourage them to carry out their duties of monitoring and providing consequences.

Jim collected only 22 attendance signatures the first week of the contract, and received his penalty that week. Each of the next two weeks he collected more than 60 signatures and received the bonus along with

his daily privileges. The school counselor's graph of daily attendance signatures collected for this three-week period is shown in Figure 7. At the end of the third week, this attendance behavior contract was renegotiated with higher criteria for the bonus and penalty clauses. A separate behavioral contract on homework assignment completion was also negotiated at this time between Jim and one of his teachers. With the school counselor's help, Mr. and Mrs. D. began to negotiate other behavioral contracts aimed at reversing some of the other areas of disturbance. The original school attendance behavioral contract, excluding the clauses specifying details of responsibilities, privileges, and monitoring, is shown in Figure 8.

Behavioral contracting was one of the major intervention strategies in the youth center research project, a large-scale, long-term correctional experiment carried out in two California institutions for juvenile delinquent boys (Jesness, 1975). In this project, institutional caseworkers and the detained youths assigned to them negotiated behavioral contracts aimed at improving academic and other educational performance, behavior required for orderly functioning of the institution and everyday getting along, and critical patterns of behavior which could influence parole success or failure following release. Recidivism rates for youths released from this program were significantly less than those for youths released from appropriate comparison institutions. Behavioral contracting has been useful in community, public school, and



FIGURE 7

JIM D.

PRIVILEGES AND RESPONSIBILITIES DEAL

Effective from OCT. 6 to OCT 24

RESPONSIBILITIES

PRIVILEGES

1 School ATTENDANCE

a) For each "ATTENDANCE SIGNATURE" JIM collects

a) Mr. D. Will SPEND 2 MINUTES WITH JIM IN JIM'S CHOICE OF ACTIVITY

b)

b)

- IF JIM collects 55 or MORE "ATTENDANCE SIGNATURES" FROM MONDAY — FRIDAY

Bonus

Mr. & Mrs. D. will TAKE JIM + ONE FRIEND to the FRIDAY NIGHT CAR RACES

- IF JIM collects less than 40 "ATTENDANCE SIGNATURES" FROM MONDAY — FRIDAY

Penalty

Mr. & Mrs. D. will NOT PERMIT JIM TO LEAVE HIS ROOM ON SATURDAY UNTIL 12 NOON

2

a)

a)

b)

b)

Bonus

Penalty

This deal is scheduled to be renegotiated on OCT. 24 at ~3:45pm at the D. HOME
Details of responsibilities and privileges are spelled out on the attached sheet.
This deal suits me and I agree to take part in it.

, counselor

home-based interventions in adolescent deviant behavior, as well as with institutionalized delinquents.

Token Economies

A widely used (and misused) behavior modification strategy for altering the behavior of groups of deviant adolescents has been the token economy. Particulars of implementing and operating a therapeutic token economy are available from many sources (for example, Ayllon & Azrin, 1968; Drabman & Tucker, 1974; Kazdin & Bootzin, 1972; O'Leary & Drabman, 1971; Stainback, Payne, Stainback, & Payne, 1973). Basically, a simulated economic system is implemented within a limited environment, and various aspects of this system are manipulated to produce desired changes in the behavior of participants. The main elements of a token economy are: (a) consideration of what behavior changes are required and clear specification of target behaviors; (b) establishment of back-up reinforcers--items or activities for which the participants are willing to work; (c) selection of appropriate tokens (symbolic rewards which function like money) on the basis of portability, durability, resistance to forgery, ease of dispensing, low cost, and other characteristics; (d) specification of rules governing acquisition of tokens and subsequent exchange for the back-up reinforcers; (e) identification of persons who will dispense the tokens, based on proximity to participants, ability to dispense tokens

according to rules, and other factors related to token economy functioning.

Token economies have been used with deviant adolescents in their natural homes, foster or community group homes, detention centers and institutions, public school and institutional classrooms, and other settings. Behavior changes have included academic and other educational responses, conduct and other interpersonal behavior, hygiene and other self-care behavior, and additional kinds of activities.

There are several major advantages to the use of token reinforcement, and token economies in general. For instance, consequences can be delivered immediately, without interruption of the target behavior. This means that token reinforcement can maintain performance by bridging the delay between a correct response and the later back-up reinforcer. Since tokens, like money, are redeemable for a wide range of desirable back-up rewards, deviant adolescents are not likely to tire of receiving them, as is the case with many reinforcers. Tokens can be accumulated in order to achieve larger back-up rewards, thereby motivating stable performance over long periods of time. Token systems can be arranged to simulate many features of real economic systems, including wages, prices, inflation, supply-and-demand, and other capitalistic phenomena; savings, loans, interest, and other banking processes; profits, losses, sales, lay-aways, and other marketing techniques. For this reason, tokens are useful in teaching various arithmetic skills. One of the major

advantages of token economies is that the behavior of many participants in a token economy can be managed relatively easily because they are all reinforced with the same token, even though they have different preferences for the back-up rewards.

There are also some important disadvantages to the use of token economies. These disadvantages are not necessarily inherent in the use of token reinforcement, but primarily arise from unskilled, careless, or unscrupulous use of tokens by those who designed the token economy or those who actually dispense tokens to the participants. For instance, token economies can easily encourage the participants to be overly dependent on the person dispensing tokens or on the system in general. Although it is usually desirable that adolescents in a token economy carry out legitimate instructions given to them, it is more important that they be able to act competently without requiring direction from others. Much foresight and careful planning is required in this sensitive area, which is certainly not unique to the use of token economies or behavior modification in general.

This issue of over-dependency of participants is a specific case of a more general potential disadvantage of token economies. Assuming that powerful back-up reinforcers are available and adequate rules of exchange are carried out competently, dramatic changes in a wide range of target behaviors can be achieved for participants in the token system. But most token economies are quite different from the real world in which the adolescent's deviancy was identified: tokens are

obviously not money, the consequences of correct and incorrect behaviors are not as immediately or consistently forthcoming in the real world, and so on. So the beneficial changes brought about within a token economy may abruptly vanish when the token economy is no longer in effect. If adaptive changes in behavior produced by a token economy are to continue after release from the treatment setting, programs for therapeutic generalization must be planned and carried out.

The Achievement Place Project illustrates effective use of token reinforcement procedures with deviant adolescents. This is a "Teaching-Family" group home model, intended to serve as a community-based and directed alternative to detention center placement for adolescents who are in trouble; one of its most important components is a token economy. The Teaching-Family model is described in detail elsewhere (Bailey, Wolf, & Phillips, 1970; Bailey, Timbers, Phillips, & Wolf, 1972; Fixsen, Phillips, & Wolf, 1972, 1973a, 1973b; Phillips, 1968; Phillips, Phillips, Fixsen, & Wolf, 1971, 1972; Phillips, Wolf, & Fixsen, 1973; and Wolf, Phillips, & Fixsen, 1972).

Briefly, the Teaching-Family model includes the following components. The community, school, home, and legal problems of adolescents are seen to stem from inappropriate and incompetent behavior in several areas of adjustment. Therefore, a large number of structured teaching interactions between the adolescent and the Achievement Place Teaching-Parents are carried out in order to instruct and encourage appropriate behavior in a number of areas:

social, self-care, prevocational, family living, and self-control within the group home setting. Training is also geared to encouraging behavior required for appropriate adjustment in the community, the school, and the adolescent's natural family to which he will return. The Teaching-Parents are highly trained to carry out these structured teaching interactions, as well as other activities required for successful implementation of the Teaching-Family model. Intensive evaluation through verification designs and group research designs is a major concern of the Teaching-Family model. Not only is this group home model evaluated in an overall sense in many ways, but the structured teaching interactions and other treatment procedures are also closely analyzed. The effectiveness of many teaching procedures has been verified, others have been disconfirmed as largely ineffective, and in some cases the relative merits of different effective procedures have been contrasted, permitting selection of the most appropriate technique. Within this framework, the learning and performance of adolescents assigned to Achievement Place group homes are motivated through the use of a token economy.

The Achievement Place token economy is a series of progressively less structured token exchange arrangements, differing in the amount of delay between the token transaction and the time when accumulated tokens are exchanged for back-up reinforcers. Early in his stay at Achievement Place, the adolescent may be on the hourly point system, in which points are accumulated over an interval of

several hours and are then used to buy various privileges for the following interval of several hours. On the daily point system, points are accumulated over a 24-hour period, then used to purchase privileges for the following 24-hour period. On the weekly point system, the same procedure holds except points are accumulated and privileges bought for a seven-day period. Also on the weekly point system, daily minimums of points must be earned or the right to use the privileges previously bought is temporarily suspended. The next higher system is called the merit system. Participation in the merit system is earned by youths on the weekly point system who consistently accumulate more points than they need to buy their privileges for the following week. The excess tokens are used to purchase supertokens ("bonds"). When enough bonds are earned, the youth can enter the merit system, in which privileges are freely available and no points are earned or lost. However, regular ratings of merit system participants take place, in order to make sure that behavioral gains are being maintained. There are also special arrangements for youths who temporarily show maladjustment or who chronically fail to make necessary improvements in a particular area.

The general sequence of progression through these systems is from more immediate to more remote point redemption and finally access to privileges without the need for points to be exchanged. However, inadequate performance in any system leads to a return to the next lower system. During progression through the systems, the

youth is also spending progressively more time in his natural home, and home behavior is tied into the point system as well. As the youth shows that he can maintain appropriate behavior in the home, and as parents demonstrate their ability to deal with everyday management of the youth and crisis situations, the Teaching-Parents' guidance is phased out gradually.

In the various token systems, points can be earned for a variety of desirable behaviors, including participation in the regular decision-making family conference, volunteering for unpopular tasks, taking part in meal preparation, housekeeping tasks, yard work, good school grades, completion of homework, helping fellow residents complete their tasks, practicing adaptive behavior recently learned from a structured teaching interaction, and in other ways. A wide range of misbehavior also costs the youth points. For instance, fighting, temper tantrums, rowdiness, arguing, other aggressiveness, moodiness, poor table manners, dishonest behavior, misuse or damage to property, disobedience to Teaching-Parents, not reporting a peer's role infraction, poor personal appearance, problems with teachers or other school officials, poor school grades, and other misbehaviors are fined specific numbers of points. The Achievement Place token economies are constructed so that a youth who loses even a large number of points may, through extra effort and work, make up his losses. This means that only if a youth misbehaves excessively and stubbornly refuses to

work to make up his losses will he fail to earn at least some of the privileges potentially available to him.

The back-up reinforcers for which points are exchanged include items and activities that are available around most homes, one-of-a-kind opportunities, and other special events. The privilege which must be bought first is called "basics;" this includes access to the telephone, radio, recreation room, use of tools, and going outdoors. The privilege which must be bought next is snacks. Next, access to TV at certain times of the day must be bought. Next, the right to go home from Friday evening to Sunday evening must be purchased. After these four privileges are bought, if the youth has accumulated additional points, he is free to select any of a number of additional privileges including allowance, the right to work for money, other special or occasional privileges, and the bonds required to earn his way on to the merit system.

Points earned or lost are recorded on a point card which each adolescent carries with him throughout the day. Points earned are kept separate from points lost, and for each point transaction the youth writes the amount of the transaction and the reason why points were earned or lost. The Teaching-Parent or a person designated by the Teaching-Parent then initials the point card. Regardless of which particular system the youth is operating under, his point accumulation is the difference between those made and those lost; it is possible (but in practice unusual) that this difference will be negative. Special

earning arrangements are available for boys who fail to accumulate required point totals.

Many of the Achievement Place token economy procedures, as well as other components of the Teaching-Family model, have been evaluated through verification designs. (Some of the evaluation reports are cited at the beginning of this section.) These reports confirm the effectiveness the token motivational system has implemented in the context of the overall Teaching-Family model. Many of the advantages of token economies in general are also characteristic of the Achievement Place token economy, and it is doubtful that the large number of structured teaching interactions and other re-educational activities could be successfully carried out in the absence of the point systems.

The overall efficacy of the Teaching-Family treatment model is encouraging. Phillips, et al., (1972) reported a follow-up comparison of a group of youths admitted to Achievement Place to two other groups of similar youths sent to either a state juvenile detention center or placed on probation. The status of boys in these three groups was identified two years after release from their respective placements. Over half of both the institution boys and the probation boys had been readjudicated and institutionalized, whereas this had occurred with less than one-fifth of the Achievement Place youths. Additionally, three semesters after release only 9% of the institution youths and 37% of the probation youths were still attending school, while 90% of Achievement Place youths were. Of all youths who attended school, the institution

youths and probation youths passed less than half of their classes, while Achievement Place youths passed more than 90% of theirs. In the same report, it was pointed out that initial costs for an Achievement Place home are less than one-third that of a state institution, and operating costs about half that of an institution. These comparisons are not specifically evaluations of the token economy, but the token economy was a crucial component of the Teaching-Family model.

Reinforced Modeling

It is frequently reported that deviant adolescents consistently show certain patterns of maladjustment, such as freedom to accept criticism appropriately or failure to delay immediate gratification in order to receive later benefits, which both bring them to the attention of the helping professions originally and complicate or undermine successful adjustment after intervention. Many of these deviant behavior patterns have been successfully treated through a composite behavior modification strategy that features reinforced modeling (Alexander & Parsons, 1973; Bandura, 1973; Gittelman, 1965; Mahoney, 1971; Prazak, 1969; Sarason, 1968; and Sarason & Ganzer, 1969, 1973).

Besides criticism and immediate gratification problems, reinforced modeling has been employed with other patterns of maladjustment. These include rejection of the authority of parents, teachers, policemen, and others; inability to resist peer pressure to deviate; unwillingness to accept responsibility or blame for mistakes; inability

to back down from an argument or a fight; failure to complete necessary tasks such as school work, job requirements, and so on; unwise use of leisure time, leading to deviant behavior; lack of ways to express assertion except through anger, aggression, argumentativeness, or other troublesome responses; frequent showing-off by deviant behavior in order to get attention of others; habitual failure to make preparations or plans for upcoming situations; inability to approach caseworkers, counselors, or other potentially helpful adults to ask for assistance; poor performance in formal interview situations, such as interviewing for a job or reporting to a probation or other court caseworker.

The reinforced modeling treatment assumes that the above and other related problems are evidence of a lack of certain skills for dealing with that particular situation. Whereas nondeviant adolescents are more likely to perform competently in these types of situations, the deviant adolescent may never have acquired the needed skills or is uninformed as to which skills should be performed in the various situations.

There are four separate components of the reinforced modeling technique. First, the specific behavioral skills required for successful performance in the particular situation to be trained must be decided upon. This step involves a good deal of cleverness on the part of the trainer. Some of the most important behaviors required for success in any given situation are not immediately obvious, so the trainer must reflect upon what exactly is done by a person who is successful in the

situation. Physical appearance, facial expressions, verbal behavior, and other subtleties must be considered. When the important skills have been decided upon, they must be stated in such a way that the adolescent knows what is expected of him and the trainer knows when each skill has been correctly performed.

The second component involves repeated demonstration of each of the required skills. These demonstrations may be performed by live, videotaped, or filmed models, and demonstration by several models is probably preferable. For each skill that is modeled, a rationale in terms of its importance to the complex skill to be learned should be given. A discussion of the fine points in performing this skill may also be helpful. Finally, typical mistakes in performing each skill are pointed out, and may also be modeled and critiqued by the trainee (or group of trainees).

The next component of reinforced modeling is guided practice by the trainee under "safe" training conditions. Adolescents who are reluctant to perform an unfamiliar skill or one which would ordinarily be criticized by their peers will be more likely to practice the skill if it is presented as a role-playing "job." Practice, correction, and repractice is continued until performance is skillful and spontaneous in the training situation. At each step of the way, approval for correct performance, and other kinds of positive reinforcement, should be provided by the trainer or the other members of the training group. If practice is videotaped, the trainee can monitor and critique his own

performance. For complex skills, imperfect approximations to the terminal skill are temporarily accepted as correct, with successively more perfect approximations required (shaping). Note that this component of reinforced modeling is not an unstructured role-playing situation, but planful, guided practice in appropriate skills.

After component skills are quite familiar and the entire adaptive behavior pattern can be performed with ease, further practice takes place in more realistic situations. Guidance by the trainer is still provided; by choosing successively more difficult realistic situations, the trainer can phase out his guidance as the trainee continues to remain proficient at performing the skills.

As with almost any intervention, reinforced modeling technique will often be applied to adolescents who are not motivated to participate. External motivations of various kinds may be required to induce recalcitrant clients to take part in treatment. However, when it becomes clear that the skills they have learned can provide them with previously unavailable benefits in the natural environment, adequate performance is likely to be maintained, as it is for nondeviant persons.

The reinforced modeling treatment can be illustrated for problems of arguing and other unproductive responses to conflict between predelinquent adolescents and their parents. (This example is loosely based on Kifer, Lewis, Green, & Phillips, 1974.) In this case, communication between the adolescents and their parents often led to

arguments, stand-offs, and ill feeling which continued beyond the specific conflict, negatively influencing other areas of family living.

Adolescent and parent were trained together in a simulation situation. Both parties typically approached a conflict situation by making demands upon one another, refusing to compromise, diverting attention from the particular issue by bringing up past faults or offenses of the other party, or chronically behaving in other ways which not only produced little resolution of the particular issue but also resulted in counterproductive relationships in many areas. The trainers decided that skills required for successful negotiation might include: (a) complete communication--a statement that clearly put forward one's position, exactly what one thinks or wants out of this situation, plus a request to the other person to state his thoughts or wishes about the situation, or about the original position expressed by the first party; (b) issue identification--a statement that unambiguously identifies the point of conflict by contrasting the two opposing positions, attempting to clarify or get more information about the other person's position, or relating the specific conflict to another overriding issue; (c) suggestion of options--statements that offer a course of action which might resolve the conflict, but which are not simple restatements of an original position. Statement of many options was encouraged to increase the chance that there would be grounds for agreement.

The next component in this reinforced modeling approach would be to repeatedly model to the trainees how to make a statement of

complete communication, one which identifies the issues, and one which suggests numerous possible options. These behaviors and the entire sequence of behaviors were rationalized as important in increasing the likelihood that negotiation might take place. Mistakes which might commonly be made were pointed out, along with why these were mistakes.

Next, practice of the skills was carried out under guidance from the trainers. Trainees were told which skills to use at each point, were praised for correct use, and were reminded which negotiation skill was appropriate at what time. The trainees could look at videotapes of a session whenever they wished.

Finally, the adolescent and his parent had to use the three negotiation skills in a simulated conflict situation. The trainers used progressively less guidance until the three negotiation behaviors (complete communication, identification of issues, and suggestion of options) were skillfully and spontaneously used to arrive at a negotiated settlement.

This reinforced modeling intervention continued for several sessions with each pair of trainees. Data from both the training simulations and from home observation carried out with each family pair indicated that the trainees began using the three negotiation behaviors more frequently and that agreements were more likely to be reached, following the training procedure. The use of reinforced modeling or other procedures to enhance negotiation skills between deviant

adolescent and other persons potentially has wide usefulness in school and community counseling, rehabilitation programs for delinquents, and other settings.

In the particular example of reinforced modeling discussed above, instruction and discussion played a large role along with modeling. In other examples, however, the skills to be learned may be so complex that verbal instruction is less useful than the modeling. Just as a picture is worth a thousand words, a clear modeling demonstration may be worth a thousand instructions, for some intricate behavior patterns. Therefore, other applications of reinforced modeling have more heavily relied on the modeling component. The general rationale and principles, however, are the same.

Concluding Remarks

Although behavior modification procedures alone can bring about beneficial changes in adolescent deviance, intervention programs or projects may often use behavior modification techniques in combination with other treatments. There are few treatments with which behavioral procedures cannot be made compatible, especially if the basic requirements--focus on observable phenomena, repetitive assessment, and treatment verification--are met.

All treatment approaches must be responsive to scientific evidence about new methods of changing deviant behavior. Since this responsiveness is largely built in with behavior modification, constant revisions to the assumptions and practice of behavior modification are to be expected. Those who wish to keep abreast of changes and adaptations are advised to consult behavior modification journals including Behavior Research and Therapy, Behavior Therapy, Journal of Applied Behavior Analysis, and Journal of Behavior Therapy and Experimental Psychiatry.

REFERENCES

- Alexander, J. F. and Parsons, B. V. Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. Journal of Abnormal Psychology, 1973, 81, 219-226.
- Ayllon, T. and Azrin, N. H. The token economy: A motivational system for therapy and rehabilitation. New York: Appleton, 1968.
- Bailey, J. S., Timbers, G. D., Phillips, E. L., and Wolf, M. M. Modification of articulation errors of pre-delinquents by their peers. Journal of Applied Behavior Analysis, 1972, 5, 19-30.
- Bailey, J. S., Wolf, M. M., and Phillips, E. L. Home-based reinforcement and the modification of pre-delinquents' classroom behavior. Journal of Applied Behavior Analysis, 1970, 3, 223-233.
- Bandura, A. Principles of behavior modification. New York: Holt, Rinehart, & Winston, 1969.
- Bandura, A. Aggression: A social learning analysis. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- Becker, W. C., Madsen, C. H., Arnold, C. R., and Thomas, D. R. The contingent use of teacher attention and praise in reducing classroom behavior problems. Journal of Special Education, 1967, 1, 287-307.
- Brackbill, Y. Extinction of the smiling response in infants as a function of reinforcement schedule. Child Development, 1958, 29, 115-124.
- Broden, M., Hall, R. V., and Mitts, B. The effects of self-recording on the classroom behavior of two eighth grade students. Journal of Applied Behavior Analysis, 1971, 4, 191-199.
- Brown, G. D. and Tyler, V. O. Time out from reinforcement: A technique for dethroning the "Duke" of an institutionalized delinquent group. Journal of Child Psychology and Experimental Psychiatry, 1968, 9, 203-211.

- Cooper, J. O. Measurement and analysis of behavioral techniques. Columbus, Ohio: Merrill, 1974.
- Court Brown, W. M. Sex chromosome aneuploidy in man and its frequency, with special reference to mental subnormality and criminal behavior. International Review of Experimental Pathology. 1969, 7, 31-97.
- DeRisi, W. J. and Butz, G. Writing behavioral contracts. Champaign, Illinois: Research, 1974.
- Dinoff, M. and Rickard, H. C. Learning that privileges entail responsibilities. In J. D. Krumboltz and C. E. Thoresen (Eds.), Behavioral counseling. New York: Holt, Rinehart, & Winston, 1969.
- Dinoff, M., Serum, C., and Rickard, H. C. Controlling rebellious behavior through successive contracts. Child Care Quarterly, 1972, 1, 205-211.
- Drabman, R. S. and Tucker, R. D. Why classroom token economies Journal of School Psychology, 1974, 12, 178-188.
- Eysenck, H. J. Crime and personality. Boston: Houghton-Mifflin, 1964.
- Fixsen, D. L., Phillips, E. L., and Wolf, M. M. Achievement Place: The reliability of self-reporting and peer-reporting and their effects on behavior. Journal of Applied Behavior Analysis, 1972, 5, 19-30.
- Fixsen, D. L., Phillips, E. L., and Wolf, M. M. Achievement Place: Experiments in self-government with pre-delinquents. Journal of Applied Behavior Analysis, 1973, 6, 31-47. (a)
- Fixsen, D. L., Phillips, E. L., and Wolf, M. M. The Teaching-Family model of group home treatment. In Y. Bakal (Ed.), The closing down of institutions: New strategies for youth services. New York: D. C. Heath and Co., 1973. (b)
- Gittleman, M. Behavior rehearsal as a technique in child treatment. Journal of Child Psychology and Psychiatry, 1965, 6, 251-255.
- Glover, J. A. Creative responding and contingency management. Middle Tennessee Symposium on Behavior Therapy. Nashville: Tennessee State University Press, 1974.

- Hall, R. V. Managing behavior: Behavior modification: The measurement of behavior. Lawrence, Kansas: H & H Enterprises, 1971.
- Hare, R. D. Psychopathy: Theory and research. New York: Wiley, 1970.
- Jesness, C. F. An overview of the youth center project: Transactional analysis and behavior modification programs for delinquents. Behavioral Disorders, 1975, 1, in press.
- Jesness, C. F. and DeRisi, W. J. Some variations in techniques of contingency management in a school for delinquents. In J. S. Stumphauzer (Ed.), Behavior therapy with delinquents. Springfield, Illinois: Thomas, 1973.
- Kanfer, F. H. and Phillips, J. S. Learning foundations of behavior therapy. New York: Wiley, 1970.
- Kazdin, A. E. Behavior modification in applied settings. Homewood, Illinois: Dorsey, 1975.
- Kazdin, A. E. and Bootzin, R. R. The token economy: An evaluative review. Journal of Applied Behavior Analysis, 1972, 5, 343-372.
- Kifer, R. E., Lewis, M. A., Green, D. R., and Phillips, E. L. Training pre-delinquent youths and their parents to negotiate conflict situations. Journal of Applied Behavior Analysis, 1974, 7, 357-364.
- Lorenz, K. On aggression. New York: Harcourt-Brace-Jovanovich, 1966.
- MacDonald, W. S., Gallimore, R., and MacDonald, G. Contingency contracting by school personnel: An economical model of intervention. Journal of Applied Behavior Analysis, 1970, 3, 175-182.
- Mahoney, M. J. A residential program in behavior modification. Paper presented at the Fifth Annual Meeting of the Association for the Advancement of Behavior Therapy, Washington, D. C., September, 1971.

- McAllister, L. W., Stachowiak, J. G., Baer, D. M., and Conderman, L. The application of operant conditioning techniques in a secondary school classroom. Journal of Applied Behavior Analysis, 1969, 2, 277-285.
- O'Leary, K. D. and Drabman, R. Token reinforcement programs in the classroom: A review. Psychological Bulletin, 1971, 75, 379-398.
- O'Leary, K. D. and Wilson, G. T. Behavior therapy: Application and outcome. Englewood Cliffs, New Jersey: Prentice-Hall, 1975.
- Patterson, G. R., Cobb, J. A., and Ray, R. S. A social engineering technology for retraining the families of aggressive boys. In H. E. Adams and I. P. Unikel (Eds.), Issues and trends in behavior therapy. Springfield, Illinois: Thomas, 1973.
- Phillips, E. L. Achievement Place: Token reinforcement procedures in a home-style rehabilitation setting for "pre-delinquent" boys. Journal of Applied Behavior Analysis, 1968, 1, 213-223.
- Phillips, E. L., Phillips, E. A., Fixsen, D. L., and Wolf, M. M. Achievement Place: Modification of the behaviors of pre-delinquent boys within a token economy. Journal of Applied Behavior Analysis, 1971, 4, 45-59.
- Phillips, E. L., Phillips, E. A., Fixsen, D. L., and Wolf, M. M. The Teaching-Family Handbook. Lawrence, Kansas: University Printing Service, 1972.
- Phillips, E. L., Wolf, M. M., and Fixsen, D. L. Achievement Place: Development of the elected manager system. Journal of Applied Behavior Analysis, 1973, 6, 541-561.
- Pierce, C. H. and Risley, T. R. Recreation as a reinforcer: Increasing membership and decreasing disruptions in an urban recreation center. Journal of Applied Behavior Analysis, 1974, 7, 403-411.
- Polani, P. E. Occurrence and effect of human chromosome abnormalities. In R. Platt and A. S. Parkes (Eds.), Society symposium: Social and genetic influences on life and death. New York: Plenum, 1967.

- Prazak, J. A. Learning job-seeking interview skills. In J. D. Krumboltz and C. E. Thoresen (Eds.), Behavioral counseling. New York: Holt, Rinehart, & Winston, 1969.
- Reckless, W. C. The crime problem. New York: Appleton-Century-Crofts, 1961.
- Reiss, A. J. Social correlates of psychological types of delinquency. American Sociological Review, 1952, 17, 710-718.
- Sarason, I. G. Verbal learning, modeling, and juvenile delinquency. American Psychologist, 1968, 23, 254-266.
- Sarason, I. G. and Ganzer, V. J. Developing appropriate social behaviors of juvenile delinquents. In J. D. Krumboltz and C. E. Thoresen (Eds.), Behavioral counseling. New York: Holt, Rinehart, & Winston, 1969.
- Sarason, I. G. and Ganzer, V. J. Modeling and group discussion in the rehabilitation of juvenile delinquents. Journal of Counseling, 1973, 20, 442-449.
- Sasmor, R. M. Operant conditioning of a small-scale muscle response. Journal of the Experimental Analysis of Behavior, 1966, 9, 69-85.
- Schwitzgebel, R. and Kolb, D. A. Inducing behavior change in adolescent delinquents. Behavior Research and Therapy, 1964, 1, 297-304.
- Slavson, S. R. Re-educating the delinquent. New York: Collier, 1961.
- Staats, A. W. and Butterfield, W. Treatment of nonreading in a culturally deprived juvenile delinquent: An application of reinforcement principles. Child Development, 1965, 36, 925-942.
- Stainback, W. C., Payne, J. S., Stainback, S. B., and Payne, R. A. Establishing a token economy in the classroom. Columbus, Ohio: Merrill, 1973.
- Storr, A. Human aggression. New York: Bantam, 1970.
- Stuart, R. B. Behavioral contracting within families of delinquents. Journal of Behavior Therapy and Experimental Psychiatry, 1971, 2, 1-11.

- Stuart, R. B. and Lott, L. A. Behavioral contracting with delinquents: A cautionary note. Journal of Behavior Therapy and Experimental Psychiatry, 1972, 3, 161-169.
- Stumphauzer, J. S. Increased delay of gratification in young prison inmates through imitation of high-delay peer models. Journal of Personality and Social Psychology, 1972, 21, 10-17.
- Tharp, R. G. and Wetzel, R. J. Behavior modification in the natural environment. New York: Academic, 1969.
- Vorrath, H. H. Positive peer culture: Content, structure, process. Lansing, Michigan: Michigan Center for Group Studies, 1972.
- Weiner, I. B. Psychological disturbance in adolescence. New York: Wiley, 1970.
- Weiss, T. and Engel, B. T. Operant conditioning of heart rate in patients with premature ventricular contractions. Psychosomatic Medicine, 1971, 33, 301-321.
- Wilson, C. W. and Hopkins, B. L. The effects of contingent music on the intensity of noise in a junior high home economics class. Journal of Applied Behavior Analysis, 1973, 6, 269-275.
- Wolf, M. M., Phillips, E. L., and Fixsen, D. L. The Teaching-Family: A new model for the treatment of deviant child behavior in the community. In S. W. Bijou and E. L. Ribes-Inesta (Eds.), Behavior modification. New York: Academic Press, 1972, 51-62.

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